

Attachments

A



February 19, 1999

Alcatel USA, INC.
1107 Parthenon Court
Bel Air, MD 21015-2020

William A. Pappentick
Account Director - Access Sales

Mr. Mike Nawrocki
Manager – New Services Technology
Bell Atlantic
13100 Columbia Pike
Silver Spring, MD 20904

RE: Multi Carrier GR-303 Issues

Dear Mike,

This letter is intended to clarify issues related to GR-303 capabilities in a multi-carrier environment and review industry activity that is investigating and addressing open issues. Although much progress has taken place in the last few years in implementing GR-303 interoperability between different equipment vendors, technologies and operations systems, the industry must continue to work toward solutions for operating and managing GR-303 systems across multiple carrier networks (e.g. A single digital loop carrier remote terminal connected to different switches owned and operated by different carriers). To meet this goal, Alcatel continues to support the Bellcore GR-303 Forum.

Alcatel has taken a lead in the industry in addressing GR-303 issues and has successfully worked with Bell Atlantic for the last several years in resolving interoperability issues between the Litespan product and various equipment vendor switches and operations systems. In terms of product capabilities, the Litespan 2000 product currently supports up to 4 Virtual Interface Groups (VIGs) in each node. This means that Litespan 2000 can be physically connected to up to four Bell Atlantic switches. Each VIG supports the call traffic and processing for any number of voice channels (within the system's capacity) assigned to it. To function, a relationship is thereby established between the Litespan 2000, the switch it is connected to and the carrier's operations systems. Alcatel has successfully demonstrated the operation of multiple VIGs for a single carrier. However, operating GR-303 in a multi-carrier, multiple VIG environment introduces a number of significant additional challenges to the industry that still must be solved. These are summarized in Attachment A.

Respectfully,

Bill Pappentick

attachment

- **Overall Control & Management of the Litespan System Must Be Administered By One Carrier** – The Litespan system supports one X.25 communications channel. Therefore, one company's Support System has visibility to all software loads, configuration changes and maintenance. Alarms and provisioning associated with the overall system can't be managed through multiple GR-303 VIGs, but rather are managed across the single X.25 communication channel. The system control cannot be partitioned across carriers or individual channel banks.
- **Industry groups are still addressing real time dynamic Time Slot Interchange (TSI) functionality in a multi-carrier environment** – TSI is the real time allocation of network capacity between the switch and the NGDLC system for call processing. Dynamic TSI in a multi-carrier environment would require that GR-303 inventory and assignments are pre-assigned when the interface group is initially established. The Bellcore GR-303 Forum has identified the operations flow associated with this issue as an area requiring additional work from an industry perspective.
- **There is only one master database within the Litespan and only one Operating System can maintain complete control** – The Litespan system can only have either the OPS/INE and Switch DLE/SA system (used in Bell Atlantic) or the Alcatel Access Management System (AMS) for provisioning line ports to GR-303 interface groups. Multiple OSs (that would be used by multiple carriers) cannot control a single Litespan system. Database backup and restore process from a remote Network Operating Center (NOC) requires that one backup system be ready and capable of restoring the Litespan database under control of one work group. This same group would be responsible for common equipment upgrades to the system that all GR303 interface groups depend upon, such as power supply cards, battery backup, fans, system communication links, shared ringing and tone cards and Litespan software upgrades.
- **Testing resources and procedures associated with a multi-carrier GR-303 system are more complex and must be coordinated across carriers** Given that each carrier may have unique Test Systems that they want connected to the Litespan system, separate test devices may be required for each GR-303 interface group. Testing procedures must be developed to avoid either an inability to access specific channels for testing or an invalid attempt to access a channel outside of a given carrier's interface group. For example, this may require that traffic be segregated to separate channel banks or bays on a per carrier basis when a Litespan system is associated with multiple CLECs. The need for unique test systems required by multiple carriers may also result in a limitation in the number of available VIGs that can be supported from a single system.
- **Multiple carriers owning VIGs cannot each monitor system alarms** – The Litespan common control alarms are not carried over a GR-303 VIG, but are sent to a single common Craft interface or element management system. The system controller alarms are an extensive set of alarms that are reported to only one network operations center.
- **Provisioning of GR-303 interface groups between carriers will require development of Detailed Operations Processes between the carriers owning the switches and the carrier owning the Litespan system** – Provisioning of GR-303 channels will require that all carriers agree that the single carrier who owns the Litespan system act as the system administrator for all carriers' switches connected to the Litespan. This system administration function cannot be performed from the switch. Without an automated system, like a separate Element Management system, this function must be performed locally at the digital loop carrier system. A system administrator must build the GR-303 interface groups and associate DS1 cards to GR303 Interface Groups for the individual carrier.

B

Verizon Virginia Inc.

State of Virginia

CC Docket Nos. 00-218, 00-249 and 00-251

REQUEST: AT&T Communications of Virginia, Inc., and WorldCom, Inc., Set #6

DATED: August 3, 2001

ITEM: Refer to Verizon's Part B-17, Line Sharing – OSS. Please provide the underlying demand forecast of line splitting lines. How was this projection of line splitting lines developed? Please identify the projection's specific source, identify the specific individual(s) responsible, provide the basis for the projection (including complete copies of any analyses or studies performed) and provide complete copies of any supporting documentation (including workpapers, calculations, source documents, memorandum, etc.).
AT&T/WCOM 6-72

REPLY: The demand forecast for line splitting lines was provided in the proprietary cost model workpapers filed on July 2, 2001. Please see response to AT&T/WCOM 6-71.

VZ VA #481

Verizon Virginia Inc.

State of Virginia

CC Docket Nos. 00-218, 00-249 and 00-251

REQUEST: AT&T Communications of Virginia, Inc., and WorldCom, Inc., Set #6

DATED: August 3, 2001

ITEM: Please provide a complete copy of the original documentation of each individual time estimate supplied by individual Verizon work center personnel, as described in Verizon's Panel Testimony at pages 306 and 311. Please also supply a copy of whatever electronic format(s) Verizon used to compile and/or total the individual time estimates.
AT&T/WCOM 6-21

REPLY: The original survey materials are voluminous. These materials will be made available for inspection at 1320 North Courthouse Road, 6th floor (office No. 0653) Arlington, VA. at a mutually agreeable date and time. To make arrangements to inspect the materials, please contact Eric F. Reed at 703-974-2177 or Steven E. McPherson at 703-974-2808.

The attached file ATTWCOM 6-21_Survey Responses.xls contains the spreadsheet with the individual time estimates in electronic form. This document is very lengthy and is not being provided with the hard copies of these responses.


"ATTWCOM
6-21_SURVEY RESP"

VZ VA #430

WkOp	A	B	C	D	UNE Number Activity Connect/Disconnect																													
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3	RCCC/RMC		5	22 Connect
4	RCCC/RMC		5	23 Connect
5	RCCC/RMC		5	25 Connect
6	RCCC/RMC		5	26 Connect
7	RCCC/RMC		5	27 Connect
8	RCCC/RMC		5	33 Connect
9	RCCC/RMC		5	34 Connect
10	RCCC/RMC		5	37 Connect
11	RCCC/RMC		5	38 Connect
12	RCMAC		5	1 Connect
13	RCMAC		5	1 Disconnect
14	RCMAC		5	2 Connect
15	RCMAC		5	2 Disconnect
16	RCMAC		5	5 Connect
17	RCMAC		5	5 Disconnect
18	RCMAC		5	7 Connect
19	RCMAC		5	7 Disconnect
20	CO FRAME		6	2 Connect
21	CO FRAME		6	2 Disconnect
22	CO FRAME		6	6 Connect
23	CO FRAME		6	7 Connect
24	CO FRAME		6	10 Connect
25	CO FRAME		6	15 Connect
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42	CO FRAME		6	26 Connect
43	CO FRAME		6	27 Connect
44	CO FRAME		6	33 Connect
45	CO FRAME		6	34 Connect
46	CO FRAME		6	37 Connect
47	CO FRAME		6	38 Connect
48	CO FRAME		7	3 Connect
49	CO FRAME		7	3 Disconnect
50	CO FRAME		7	4 Connect
51	CO FRAME		7	4 Disconnect
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54	CO FRAME		7	18 Connect
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73	RCCC/RMC		7	2 Disconnect
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44	RCCCRCMC	9	2	Disconnected																																																																																																																																																																																																																																																																																																																																																																												
45	RCCCRCMC	9	3	Connected																																																																																																																																																																																																																																																																																																																																																																												
46	RCCCRCMC	9	3	Disconnected																																																																																																																																																																																																																																																																																																																																																																												
47	RCCCRCMC	9	4	Connected																																																																																																																																																																																																																																																																																																																																																																												
48	RCCCRCMC	9	4	Disconnected																																																																																																																																																																																																																																																																																																																																																																												
49	RCCCRCMC	9	5	Connected																																																																																																																																																																																																																																																																																																																																																																												
50	RCCCRCMC	9	6	Connected																																																																																																																																																																																																																																																																																																																																																																												
51	RCCCRCMC	9	8	Connected																																																																																																																																																																																																																																																																																																																																																																												
52	RCCCRCMC	9	18	Connected																																																																																																																																																																																																																																																																																																																																																																												
53	RCCCRCMC	9	19	Connected																																																																																																																																																																																																																																																																																																																																																																												
54	RCCCRCMC	9	20	Connected																																																																																																																																																																																																																																																																																																																																																																												
55	CO FRAME	9	21	Connected																																																																																																																																																																																																																																																																																																																																																																												
56	CO FRAME	9	22	Connected																																																																																																																																																																																																																																																																																																																																																																												
57	CO FRAME	9	22	Connected																																																																																																																																																																																																																																																																																																																																																																												
58	CO FRAME	9	23	Connected																																																																																																																																																																																																																																																																																																																																																																												
59	CO FRAME	9	26	Connected																																																																																																																																																																																																																																																																																																																																																																												
60	CO FRAME	9	33	Connected																																																																																																																																																																																																																																																																																																																																																																												
61	CO FRAME	9	34	Connected																																																																																																																																																																																																																																																																																																																																																																												
62	CO FRAME	9	37	Connected																																																																																																																																																																																																																																																																																																																																																																												
63	CO FRAME	9	38	Connected																																																																																																																																																																																																																																																																																																																																																																												
64	CO FRAME	10	2	Connected																																																																																																																																																																																																																																																																																																																																																																												
65	CO FRAME	10	2	Disconnected																																																																																																																																																																																																																																																																																																																																																																												
66	CO FRAME	10	5	Connected																																																																																																																																																																																																																																																																																																																																																																												
67	CO FRAME	10	6	Connected																																																																																																																																																																																																																																																																																																																																																																												
68	CO FRAME	10	7	Connected																																																																																																																																																																																																																																																																																																																																																																												
69	CO FRAME	10	10	Connected																																																																																																																																																																																																																																																																																																																																																																												
70	CO FRAME	10	15	Connected																																																																																																																																																																																																																																																																																																																																																																												
71	CO FRAME	10	21	Disconnected																																																																																																																																																																																																																																																																																																																																																																												
72	CO FRAME	10	22	Connected																																																																																																																																																																																																																																																																																																																																																																												
73	RCCCRCMC	10	1	Connected																																																																																																																																																																																																																																																																																																																																																																												

A	B	C	D	BA	BI	BU	BK	BL	BM	BN	BO	BP	BO	BR	BS	BT	BU	BY	BW	BX	BY	BZ	CA	CB	CC	CD	CE	CF	CG	CH	CI	CJ	CK	CL	CM
RCCC/RCMC		10	1 Disconnect																																
RCCC/RCMC		10	2 Disconnect																																
RCCC/RCMC		10	3 Connect																																
RCCC/RCMC		10	4 Disconnect																																
RCCC/RCMC		10	5 Connect																																
RCCC/RCMC		10	6 Connect																																
RCCC/RCMC		10	19 Connect																																
RCCC/RCMC		10	20 Connect																																
RCCC/RCMC		10	21 Connect																																
RCCC/RCMC		10	22 Connect																																
RCCC/RCMC		10	23 Connect																																
RCCC/RCMC		10	25 Connect																																
RCCC/RCMC		10	26 Connect																																
RCCC/RCMC		10	33 Connect																																
RCCC/RCMC		10	34 Connect																																
RCCC/RCMC		10	37 Connect																																
CO FRAME		10	38 Connect																																
CO FRAME		11	3 Connect																																
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CO FRAME		11	4 Connect																																
CO FRAME		11	4 Disconnect																																
CO FRAME		11	6 Connect																																
CO FRAME		11	11 Connect																																
CO FRAME		11	16 Connect																																
CO FRAME		11	21 Disconnect																																
CO FRAME		11	22 Connect																																
RCCC/RCMC		11	22 Disconnect																																
RCCC/RCMC		11	1 Connect																																
RCCC/RCMC		11	2 Connect																																
RCCC/RCMC		11	3 Disconnect																																
RCCC/RCMC		11	4 Connect																																
RCCC/RCMC		11	4 Disconnect																																
RCCC/RCMC		11	5 Connect																																
RCCC/RCMC		11	5 Disconnect																																
RCCC/RCMC		11	6 Connect																																
RCCC/RCMC		11	10 Connect																																
RCCC/RCMC		11	11 Connect																																
RCCC/RCMC		11	14 Connect																																
RCCC/RCMC		11	16 Connect																																
RCCC/RCMC		11	17 Connect																																
RCCC/RCMC		11	24 Disconnect																																
RCCC/RCMC		11	26 Connect																																
RCCC/RCMC		11	31 Disconnect																																
RCCC/RCMC		11	32 Disconnect																																
TISOC		11	35 Connect																																
TISOC		11	1 Connect																																
TISOC		11	2 Connect																																
CO FRAME		12	3 Connect																																
CO FRAME		12	3 Disconnect																																
CO FRAME		12	8 Connect																																
CO FRAME		12	11 Connect																																
CO FRAME		12	18 Connect																																
CO FRAME		12	21 Disconnect																																
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RCCC/RCMC		12	1 Connect																																
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RCCC/RCMC		12	26 Connect																																
RCCC/RCMC		12	31 Disconnect																																
RCCC/RCMC		12	32 Disconnect																																
RCCC/RCMC		12	35 Connect																																
CO FRAME		13	1 Connect</td																																

A	B	C	D	BI	BI	BJ	BK	BL	BM	BN	BO	BP	BO	BR	BS	BT	BU	BV	BW	BX	BY	BZ	CA	CB	CC	CD	CE	CF	CG	CH	CI	CJ	CK	CL
RCCC/RCMC	43	16	Connected																															
RCCC/RCMC	49	11	Connected																															
RCCC/RCMC	49	15	Connected																															
RCCC/RCMC	49	16	Connected																															
RCCC/RCMC	49	17	Connected																															
RCCC/RCMC	49	19	Connected																															
RCCC/RCMC	49	26	Connected																															
RCCC/RCMC	49	28	Connected																															
RCCC/RCMC	49	30	Connected																															
RCCC/RCMC	49	32	Connected																															
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